

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/625,262	MENDLER, EDWARD CHARLES	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mahmoud Gimie	3747	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to filing on 7/23/03.
  2. ☒ The allowed claim(s) is/are 1-21.
  3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
  4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☒ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>2/10/04</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                              | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claim 1, line 15, "rout" has been changed to --root--

Claim 19, line 15, "rout" has been changed to --root--

### EXAMINER'S STATEMENT OF REASONS OF ALLOWANCE

2. The following is an examiner's statement of reasons for allowance:

The primary reason for allowance of claims 1 and 19 is the inclusion of the limitations of "wherein said intake port has a total outlet area, said total outlet area being equal to the sum of the inner valve seat cross section areas for the one or more intake valves in fluid communication with said intake port, and said intake port has an equivalent outlet diameter, said equivalent outlet diameter being equal to the square [root] of the quantity total outlet area times four divided by pi, wherein said cylinder head has two intake valves in fluid communication with said intake port, wherein said intake port includes a ram tuning pipe, a venturi having a throat and a venturi cross section area, said venturi cross section area being measured at said throat, a surge chamber, an outlet nozzle,

wherein the intake port has a ratio of venturi cross section area to total outlet area, said ratio of venturi cross section area to total outlet area being no more than 0.87, wherein the intake port has a tuning length, said tuning length being the average distance between the throat and the one or more intake valve seat inner diameters, wherein said surge chamber has a surge chamber inlet end and a surge chamber outlet end, said surge chamber inlet end being located 30 percent of the tuning length downstream of said throat, and said surge chamber outlet being located 20 percent of the tuning length upstream of said intake valve inner seat diameter, said surge chamber further having a volume within said intake port and between said surge chamber inlet end and said surge chamber outlet end, wherein the surge chamber volume is greater than the product of total outlet area times 0.26 times the tuning length, wherein said venturi has a venturi inlet end and a venturi outlet end, said venturi inlet end being located 5 percent of the tuning length upstream of said throat, and said venturi outlet being located 5 percent of the tuning length downstream of said throat, said venturi further having a venturi volume within said intake port and between said venturi inlet end and said venturi outlet end, wherein the venturi volume is less than the product of total outlet area times 0.09 times the tuning length, thereby providing an intake port with a high flow coefficient and dynamic tuning for a high volumetric efficiency" in claims 1 and 19 that the prior art of record neither taught nor suggested.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mahmoud Gimie whose telephone number is 703-305-1037. The examiner can normally be reached on Tuesday-Friday between 7 a.m. -3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Yuen can be reached on 703-308-1946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MAHMOUD GIMIE  
PRIMARY PATENT EXAMINER  
ART UNIT 3747

MG